SCS/DEV/76/17

SOUTH CHINA SEA FISHERIES
DEVELOPMENT AND COORDINATING
PROGRAMME

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FOOD AND AGRICULTURE ORGANIZATION
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THE SOUTH CHINA SEA FISHERIES

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DEVELOPMENT POTENTIAL OF SELECTED FISHERY PRODUCTS IN THE REGIONAL MEMBER COUNTRIES OF THE ASIAN DEVELOPMENT BANK

VOLUME 8. THE EUROPEAN CANNED FISH MARKET: PROSPECTS FOR RASTRELLIGER SPP.

SOUTH CHINA SEA FISHERIES DEVELOPMENT AND COORDINATING PROGRAMME
FOOD AND AGRICULTURE ORGANIZATION OF THE UNITED NATIONS
Manila, 1977

The South China Sea Fisheries Development and Coordinating Programme is a regional project of the Food and Agriculture Organization of the United Nations carried out with the cooperation and funding support of the Canadian International Development Agency (CIDA) and the United Nations Development Programme.

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ISBN 92-852-1008-2

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FAO 1977

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PREPARATION OF THIS DOCUMENT

During the first quarter of 1975, the Asian Development Bank explored with the FAO, through the South China Sea Fisheries Development and Coordinating Programme, the possibilities of collaborating in undertaking a study that would assist the Bank and its developing member countries in formulating investment programmes that focus essentially on high-value, export-oriented fishery products. During the third quarter of 1975, terms of reference for the study were developed with the participation of the ADB staff, the South China Sea Programme and FAO Headquarters staff. It was agreed that the study would be coordinated by the South China Sea Programme, drawing for assistance selected staff of the FAO Headquarters Policy and Planning Unit, the Industries Division and the Indian Ocean Programme. Several independent consultants were engaged by the South China Sea Programme to carry out portions of the study.

The main objectives of the study were to analyze the present market situation and projected future absorptive capacity for high-value species of fish, especially tuna and shrimp, in the major importing countries, and to compare projected market needs with present exports from developing member countries, to assess the potential for expansion of exports from these countries, and to enable the Bank and its member countries to utilize the findings of the study in the planning of future investments in fisheries production facilities within the region. The detailed terms of reference of the study are attached in Appendix A of the main report document.

The study was carried out under the interim arrangements of ADB/FAO Cooperative Action which provides a vehicle for cooperative activities on a cost sharing basis.

The commodity studies and related appendixes were prepared by Living Marine Resources, of California, Fisheries Development Ltd. of England, and Mr. M. Hotta, Fishery Economist, FAO, Rome.

The coordination of the study was carried out by the SCSP and particularly Mr. K. J. Rosenberg, Senior Economist, supported by staff member Mr. B. V. Lanier. Editing assistance was given by the staff of the South China Sea Programme, as well as by Dr. A. Labon of the Indian Ocean Programme who also was responsible for preparing the summary and profiles of the IOP countries. Further aid in technical editing of all the documents was provided by the staff of the Fishery Industry Division and the Policy and Planning Unit of FAO Department of Fisheries in Rome.

The completed Report comprises eight volumes. The main report document (Vol. 1, SCS/DEV/76/11), titled "DEVELOPMENT POTENTIAL OF SELECTED FISHERY PRODUCTS IN THE REGIONAL MEMBER COUNTRIES OF THE ASIAN DEVELOPMENT BANK", is backed up by seven technical support volumes. Volume 2 is published as Appendix I of the main report document and contains monographs of selected member countries of the Asian Development Bank:

Vol. 2. FISHERY COUNTRY PROFILES, SCS/DEV/76/11 APP. I

Volumes 3-8 together form a "Commodity Series":

Vol. 3. THE INTERNATIONAL MARKET FOR SHRIMP, SCS/DEV/76/12

Vol. 4. THE INTERNATIONAL MARKET FOR TUNA, SCS/DEV/76/13

Vol. 5. THE INTERNATIONAL MARKET FOR CRAB, SCS/DEV/76/14

Vol. 6. THE INTERNATIONAL MARKET FOR LOBSTER, SCS/DEV/76/15

Vol. 7. THE INTERNATIONAL MARKET FOR CEPHALOPODS, SCS/DEV/76/16

Vol. 8. THE EUROPEAN CANNED FISH MARKET: PROSPECTS FOR RASTRELLIGER SPP., SCS/DEV/76/17

Distribution:

Members of the Indo-Pacific Fisheries Commission
FAO Department of Fisheries
Other interested nations and international organizations

Bibliographic Entry:

Development potential of selected fishery products in the regional member countries of the Asian Development Bank. 8 vols. Manila, FAO, South China Sea Programme. 1977.
Vol. 8: The European canned fish market: Prospects for Rastrelliger spp. SCS/DEV/76/17. 51p.

TABLE OF CONTENTS

		Page
	PREPARATION OF THIS DOCUMENT	iii
I.	INTRODUCTION	1
	A. The Purpose of the Study and Terms of Reference	1
	B. Selection of the Country Markets for Study	1
	C. Layout of the Report	2
II.	SUMMARY AND CONCLUSIONS	3
	A. The Size and Structure of the Market	3
	B. Possible Markets for Rastrelliger	5
III.	THE CANNED FISH MARKET IN THE UNITED KINGDOM	9
	A. The Size and Composition of the Market	9
	B. Assessment of the Possible Market for Rastrelliger	10
	C. Introducing Rastrelliger to the Market	12
	D. Distributors	13
	E. Import Duties and Regulations	13
IV.	THE CANNED FISH MARKET IN FRANCE	17
	A. The Size and Composition of the Market	17
	B. The Market for Canned Mackerel	19
	C. Some Comparisons Between the Markets for Canned Sardine and Canned Mackerel	21
	D. Assessment of the Possible Market for Rastrelliger	22
	E. Distributors	23
	F. Import Duties and Regulations	24

4. Countries not included in the study were Spain, Portugal, Sweden, Denmark and Greece. Spain and Portugal both have large domestic markets for canned fish, including mackerel and sardine. However, both countries also have large fishing and canning industries which supply their respective domestic markets. There is little need for imported canned fish and on this ground, Spain and Portugal were excluded from the study.

5. Sweden, which has a considerably smaller domestic market for canned fish than Spain or Portugal, but which is an importer of canned fish, has been excluded from the study because its market is almost entirely for canned herring.

6. Denmark has a small canned herring market and a larger canned mackerel market (apparent consumption of 4-6,000 tons a year) but both imports and exports are minimal and therefore Denmark is seen as being of little importance as a potential market for Rastrelliger.

7. Greece imports some canned mackerel (usually between 1,000 and 2,000 tons a year). However, this country has not been included in the study because of the small size of the market. The introduction of a new product such as Rastrelliger is only likely to be undertaken in conjunction with the introduction of the product into one or two larger European markets.

C. Layout of the Report

8. After this introduction and the summary, the report consists of brief analysis of the canned fish markets in the countries included in the study, followed by, in section VIII, a description of procedures which should be followed in marketing new products based on Rastrelliger spp.

II. SUMMARY AND CONCLUSIONS

A. The Size and Structure of the Market

9. Table 1 shows the estimated apparent consumption of different canned fish in the selected country markets between 1969 and 1974 (apparent consumption is normally estimated as production plus imports less exports; but where stocks data exist these have been taken into account).

10. Comparing total consumption in 1974 with that in 1969, there has been a fall of some 9,000 tons. In reality, large inventories were carried forward from 1973 into 1974 - a result of heavy buying in some country markets for some commodities in 1973 combined with a slackening in demand in 1973-74 - and it is likely that actual consumption in 1973 was lower than that shown in Table 1. Similarly, actual consumption in 1974 was probably higher than that estimated, perhaps by as much as 5,000 tons.

11. All told, therefore, total apparent consumption of canned fish, which increased slightly in 1972, has since fallen back. It is hypothesized that the decrease in total consumption is a result of decreases in purchasing power and increases in prices in the selected country markets.

12. Looking at the commodity composition of the annual consumption of canned fish in 1974, herring accounts for about a third of the total. Tuna is the second most important commodity in terms of volume with about a quarter of the total consumption. Sardine has a slightly lower volume of sales than tuna, accounting for about a fifth of the total. Mackerel has about 12 per cent of the market and the remainder is divided equally between pilchard and salmon.

13. Consumption of pilchard and tuna have, with some fluctuations, remained fairly stable over the six-year period as indicated in Table 1, whereas there has been some decline in the consumption of herring and a marked fall in the consumption of salmon. There has been an increase in the apparent consumption of sardine and mackerel from 1969 to 1974, with the consumption of sardine falling slowly between 1969 and 1971 and increasing since that year, while consumption of mackerel increased up to 1971 and appears to have been falling since then.

Table 1. Estimated Apparent Consumption of Canned Fish By Type of Fish and By Country, 1969-74
(thousand metric tons)

		Herring	Tuna	Sardine	Mackerel	Salmon	Pilchard	Total
Germany	1969	125.9	15.1	10.3	1.1	-	-	152.4
	1970	123.8	15.0	7.4	3.8	-	-	150.0
	1971	117.2	8.5	8.6	3.4	-	-	137.7
	1972	121.4	12.2	10.0	4.9	-	-	148.5
	1973	125.5	12.4	11.1	3.8	-	-	152.8
	1974	121.8	9.0	9.0	2.9	-	-	142.7
France	1969	6.3	35.3	38.2	22.7	2.7	0.4	105.6
	1970	5.5	39.9	41.9	25.0	2.1	0.3	114.7
	1971	5.8	54.9	38.5	30.4	2.6	0.3	132.5
	1972	6.9	37.4	40.0	27.5	3.9	0.3	116.0
	1973	4.6	38.0	40.7	24.9	3.2	0.2	111.6
	1974	4.8	39.1	47.5	27.2	2.2	0.5	121.3
U.K.	1969	3.1	4.9	5.0	0.5	31.0	14.4	58.9
	1970	2.3	5.1	4.5	1.4	24.0	15.3	52.6
	1971	3.0	2.3	3.1	4.6	33.4	5.0	51.4
	1972	1.6	3.3	5.1	2.4	33.5	16.6	62.5
	1973	1.0	7.6	8.0	2.9	24.2	16.0	59.7
	1974	0.7	5.9	7.0	2.6	13.8	14.6	44.6
Italy	1969	-	39.5	4.7	9.1	-	-	53.3
	1970	-	38.7	2.6	7.8	-	-	49.1
	1971	-	38.8	2.4	8.6	-	-	49.8
	1972	-	36.7	2.9	9.4	-	-	49.0
	1973	-	38.0	4.4	11.4	-	-	53.8
	1974	-	41.0	4.7	8.1	-	-	53.8
Belgium/ Luxembourg	1969	1.6	3.5	3.1	4.4	4.1	3.1	19.8
	1970	1.4	3.4	2.9	4.4	2.3	2.5	16.9
	1971	1.6	3.9	3.8	5.2	3.5	1.5	19.5
	1972	1.6	3.6	3.0	4.8	3.3	3.0	19.3
	1973	0.5	4.0	3.3	4.6	3.3	3.0	18.7
	1974	0.6	3.6	3.8	4.9	2.9	2.5	18.3
Total	1969	136.9	98.3	61.3	37.8	37.8	17.9	390.0
	1970	138.3	102.1	59.3	42.4	28.4	18.1	383.3
	1971	127.6	108.4	56.4	52.2	39.5	6.8	390.9
	1972	131.5	93.2	61.0	49.0	40.7	19.9	395.3
	1973	131.6	100.0	67.5	47.6	30.7	19.2	396.6
	1974	127.9	98.6	72.0	45.7	18.9	17.6	380.7

14. The Federal Republic of Germany is the largest country market for canned fish with some 85 per cent of total consumption being accounted for by canned herring. France, the second largest market is only about 65 per cent of the size of the German market but is the largest for sardine and mackerel and, with Italy, one of the largest markets for tuna. In most of the years shown in Table 1, the Italian market has been less than half the size of the French. Whereas about three quarters of the Italian market is accounted for by tuna, it is also the second largest for mackerel, albeit less than a third of the size of the French market. The UK market has been characterized until recently by the dominance of salmon. Since 1973, however, consumption of salmon has declined sharply.

B. Possible Markets for Rastrelliger

15. The European country markets show a wide diversity, not only in size but also in their structure and characteristics. Clearly, these factors influence the likelihood of the successful development of Rastrelliger into an acceptable product in these markets.

1. United Kingdom

16. In the UK, the best prospects for introducing Rastrelliger are judged to lie in the "gap" in the market which has been brought about by the fall in the UK consumption of canned salmon. This gap amounts to about 17,000 tons a year. Tuna is regarded by canned fish distributors as the commodity most likely to meet some of the demand that was previously met by salmon but it is not expected that tuna sales over the next five years will more than double (to 10,000 tons) and indeed, any increase in sales could be inhibited by rising tuna prices and decreases in the exchange value of the pound sterling.

17. Imported mackerel, Scomber japonicus, is regarded by distributors as a low priced alternative to tuna and, in the fluid situation produced by the fall in salmon consumption, the market for mackerel may expand along with tuna.

18. The present mackerel market is 3-4,000 tons a year. It is not possible to say to what extent mackerel sales may increase, but are probably not likely to more than double, to, say, 8,000 tons a year, over the next five years. A product

based on Rastrelliger successfully marketed under a name new to consumers would take some of this mackerel market. It would be reasonable to expect under the best conditions, a share not larger than 25 per cent, say 2,000 tons.

2. France

19. As noted earlier, the canned mackerel and sardine markets of France, which are believed to be accessible to Rastrelliger, are the largest in Europe. The canned mackerel market amounts to some 27,000 tons per annum, but only a very small quantity is imported, although the tonnage of mackerel imported for canning in France is increasing. There is, however, little prospect in the foreseeable future for an import market for frozen Rastrelliger. Apart from any difficulties which may arise from instability of the product while frozen, it is anticipated that a market for canned Rastrelliger will have to be first demonstrated before canners will move away from Scomber scombrus. The issue, therefore, is whether a product based on Rastrelliger can be developed which would be sufficiently acceptable to take a significant share of the market. As in the UK, a new product would be required to be marketed under a new name. It is suggested that it would not be realistic, again under the best conditions, to expect such a product to take more than 10 per cent of the present market for mackerel within five years, say, 2,500 tons.

20. The sardine market in France, at 47,000 tons, is larger than the mackerel market and a major part of supplies are imported. Consumers of sardine are in general conservative in their tastes and it is thought that it may be extremely difficult to launch a Rastrelliger based product as a substitute for sardine in the French market.

21. While nomenclature regulations prohibit the marketing of Rastrelliger labelled as sardine or mackerel, it could be marketed and labelled as a pilchard. Imports of pilchard, however, are small and, while this outlet might be worth investigation it is prudent not to assume significant Rastrelliger sales under a pilchard label.

3. Italy

22. With regard to the Italian market, it is perhaps more difficult to make even the most tentative judgments about the changes which are possible. The market is dominated by tuna, sales of

which are about 38,000 tons a year. Mackerel and sardine sales are about 8,000 tons and 5,000 tons a year, respectively. The market for tuna is regarded by Italian distributors as being saturated and a similar judgment is often applied to the mackerel and sardine markets, although the latter has experienced some growth in recent years.

23. In Italy, as in France, the sardine market is considered by distributors to be extremely conservative. Consequently, the static mackerel market is thought to be the most accessible to Rastrelliger, especially since Rastrelliger cannot be labelled as sardine, but can be labelled as mackerel. In all, however, the Italian market, although justifying preliminary evaluation of Rastrelliger, does not appear to be sufficiently promising to merit even the most tentative and conservative estimates of possible sales.

4. Federal Republic of Germany

24. The German canned fish market is complex. The major part of the market, 120-125,000 tons, is accounted for by herring, and sardine accounts for a further 10,000 tons. Both these commodities appear to have a relatively low price elasticity of demand compared with mackerel and tuna.

25. The total market for canned fish is anticipated to continue to remain within the range of 150-155,000 tons a year. Within this total market, and taking into account the assumed sales of herring and sardine, mackerel, tuna and any other commodity such as Rastrelliger would have to compete for the remaining 15-20,000 tons which, at present, is taken by mackerel and tuna only.

26. Rastrelliger may be regarded initially as a mackerel substitute. If it is judged, after a preliminary evaluation, to be an acceptable product, a price set significantly below that of mackerel could provide Rastrelliger with considerable opportunity in the German market. Looking at the way sales of mackerel - a known fish - were built up between 1969 and 1974, it is not unreasonable to expect a rather lower level of sales by Rastrelliger, say up to 2,000 tons over a five-year term.

5. Belgium

27. Belgium is a relatively small market for canned fish, although it does show a great deal of variety in the types of fish consumed. Anticipated sales of Rastrelliger in this market are not expected to be more than 1,000-2,000 tons.

C. Conclusions

28. Subject to Rastrelliger products being developed which are acceptable and priced at levels likely to optimize revenues, the UK, France and Germany may each be capable of marketing within five years up to 2,000 tons a year. Belgium and Italy (and possibly Greece) may provide additional markets.

29. Clearly, it is premature to state acceptable prices. It does appear, however, that Rastrelliger will probably compete most directly with mackerel. To compete successfully, it would have to be priced some 25 per cent below mackerel. As a guide, the German average c.i.f. price in October-December 1975 (Germany is the most price competitive market) was US$1,479/ton, suggesting a c.i.f. price for a competing Rastrelliger product of about US$1,100/ton during that time.

30. The successful marketing of Rastrelliger products will depend on the product development, testing and launching procedures described in Section VIII of this study. However, before any valid judgments can be made about the acceptability of Rastrelliger-based products in the European markets, it is essential that samples of existing products be submitted to distributors for a preliminary evaluation. The markets in UK, France and Germany are the most suitable for such an evaluation. Discussions with distributors and coordination of the preliminary findings should be carried out from within Europe rather than at a distance. On the basis of this series of evaluations, exporters will decide their marketing program and, in particular, whether products should be developed for European rather than individual country markets.

III. THE CANNED FISH MARKET IN THE UNITED KINGDOM

A. The Size and Composition of the Market

31. The U.K. market consists almost entirely of imports. There is some domestic production of herring (about 4,000-7,000 tons per year) and exports of canned herring (amounting to some 5,000 tons a year, mostly to Commonwealth countries). A clear indication of the size and changing pattern of the U.K. market is provided by Table 2, showing imports of canned fish.

Table 2: United Kingdom: Imports of Canned Fish, 1969, 1972-74

	1969		1972		1973		1974	
	Q	AV	Q	AV	Q	AV	Q	AV
Mackerel	NA	NA	3,317	483	2,800	699	3,450	978
Pilchards	14,445	450	16,656	657	16,050	633	14,550	771
Salmon	30,485	958	32,989	2,389	23,750	3,863	13,600	4,343
Sardines	6,565	795	7,026	1,120	9,800	1,231	8,400	1,197
Tuna	4,859	977	3,261	1,459	7,500	1,871	5,350	2,302
Total incldg. caviar	63,500		69,900		68,000		52,500	
Mackerel as per cent of total	-	-	4.7		4.1		6.6	
Salmon as per cent of total	48.0		47.2		34.9		25.9	
Tuna as per cent of total	7.7		4.6		11.0		10.2	

Q - ton AV - average value in $/ton

32. In the period reviewed, the total market size can be seen to have peaked at just under 70,000 tons in 1972, remained at about that level in 1973, but then fell sharply to 52,500 tons in 1974.

33. Until 1974 the market was dominated by imports of canned salmon, originating mainly from U.S.A. and Canada. In 1972 these imports amounted to 47 per cent of all canned fish imports, but in 1974 they declined by 43 per cent compared with their 1973 level, and, in a much reduced total market, the share taken by canned salmon fell to 26 per cent. In absolute terms, imports of salmon between 1972 and 1974 fell by almost 20,000 tons. There is little doubt that this decline in sales was due to steeply rising prices; the average price per ton increased from $2,389 in 1972 to $4,343 in 1974.

34. Of the main species imported, tuna and sardine have shown a rising trend in imports with some setback in 1975, the result primarily of the buildup in the latter part of 1974 of exceptionally heavy stocks. Sardine supplies originate from Portugal, Spain and Morocco, and tuna from Japan. Imports of pilchard from South Africa appear over the long term to be on a consumption "plateau" of about 15,000 tons a year. It is interesting to note that in 1971, when a resource failure off South Africa reduced imports of pilchard to 5,000 tons, the consequent gap in the market was not filled by another canned product. The only canned fish product which showed an increase in imports from 1973 to 1974 was mackerel, Scomber japonicus, imported from Japan.

B. Assessment of the Possible Market for Rastrelliger

35. In assessing the market prospects for Rastrelliger some judgment has to be made of the sector of the canned fish market in which it is most likely to be successfully developed. Two factors suggest that, initially at least, Rastrelliger should be regarded as a substitute for Scomber japonicus.

36. Firstly, a "negative factor" is that any other sector of the market would be extremely difficult to penetrate with a Rastrelliger product. Consumer tastes associated with canned fish are conservative and there is little prospect of changing - or, more importantly, persuading distributors to try to change - entrenched consumer preferences for sardine, and, at a lower price level, for pilchard, unless the Rastrelliger price were sufficiently low for it to compete successfully with pilchard (i.e. 25-30 per cent below the pilchard price which in 1975 was $760 ton).

37. The second factor is that it is that part of the total canned fish market taken by salmon and tuna where structural changes are taking place which may open up a suitable marketing opportunity. The major feature of these changes, as noted above, is the sharp decline in salmon imports, thus creating a gap which has so far not been filled, in turn causing a contraction in the total size of the market. The relevance of these changes to the market prospects for Rastrelliger is based on a chain of product substitutabilities which have yet to be demonstrated in full, but which are, nevertheless, the basis of marketing strategy being adopted by the two main distributors who, between them, claim 90 per cent of the market.

38. The first and strongest part of this strategy is the substitutability of tuna for salmon. The traditional use of the latter product is in salad meals - the "high teas" - and tuna is an obvious replacement product. It has, indeed been marketed as such for a number of years by a major distributor. The level of acceptability of tuna was, however, relatively small until salmon prices began to increase sharply. Indications in 1975 were that tuna was gaining increased acceptability, primarily as a canned salmon substitute.

39. The role of canned mackerel in these changes is less certain. Its 1974 price (see Table 2) was 18 per cent less than the price of canned sardine and 74 per cent less than the price of canned tuna. Paradoxically, however, the main distributors report that consumers regard mackerel as more of an "up-market" product than sardine, placing it in the same group and subject to much the same attitudes as tuna. It has followed, therefore, that distributors are beginning to look to mackerel as a low priced but complementary product to tuna to take, with tuna, as much as possible of the market which has been vacated by salmon.

40. While there are certainly strong indications that tuna can substitute for salmon to a certain extent, it is not possible to judge how far the above strategy will succeed or to determine the respective roles of tuna and mackerel. Because tuna is regarded as a substitute for salmon, demand is not price elastic at prices so far experienced since, even at its high 1974 price, tuna was only slightly more than half the price of salmon in that year and, in money terms, at about the same price level as salmon was in 1972. However, it does seem reasonable that a number of macro-economic factors could help to bias consumer purchasing towards mackerel - e.g. falling real disposable incomes, further declines in the parity of the pound sterling and long term increases in the price of tuna compared with mackerel.

41. On the basis of this analysis, the preliminary judgment is that the best potential market for Rastrelliger is as an alternative to canned Scomber japonicus. Clearly the market is not going to be large, at least initially. Assuming that an acceptable product can be marketed, it would be optimistic to expect sales to be more than 50 per cent of the existing mackerel sales or about 2,000 tons, within the next five years.

C. Introducing Rastrelliger to the Market

42. The methodology of marketing a new product such as Rastrelliger is described in Section VIII of this report. It is worthwhile, however, to identify here some of the factors which have been taken into account in the U.K. and the preliminary steps which might be adopted by a potential exporter. An important factor is the nomenclature of the product. Rastrelliger is a commercially unknown product in the U.K. So far as labelling of cans is concerned, Scomber species are allowed to be described as mackerel. It is likely that it would not be possible to describe Rastrelliger simply as mackerel but it is a moot point whether the U.K. authorities would allow a qualifying prefix, e.g. chub mackerel. Having made this point, all that needs to be stated is that the further it is necessary to depart from a widely accepted name, such as "mackerel", the more consumer resistance to sales can be expected. This, in turn, would probably have one or two effects: either sales would have to be sought by low retail prices and these, coupled with the high money margins required by distributors and retailers to handle an initially slow moving product, would severely reduce the C.I.F. price to the exporter; or, in the event of a familiar name not being available, distributors may decline to handle the product. Both these factors, however will be dependent to some degree on the acceptability of the product.

43. The potential exporter of Rastrelliger must consider the future development of the U.K. canned fish market and the likely sales volume of Rastrelliger within this market, together with potential sales in other European countries. If it is then decided to explore the possibilities of entering the U.K. market, the next step would be to contact a U.K. distributor with a view to having a preliminary evaluation made of existing products. At least one U.K. distributor has pioneered in introducing new canned fish products to the U.K. market. As part of its initial evaluation, a distributor would assess the acceptability to U.K. authorities of certain types of names, e.g. whether or not

"mackerel" in conjunction with a qualifying prefix would be acceptable, and would assess the acceptability to U.K. consumers of the product, subject to any change resulting from subsequent development. If, on the basis of the preliminary evaluation, both the exporter and distributor decide to proceed, conventional market development can be adopted. Under these circumstances, the distributor may look to the exporter for at least part-time financing. This development is described in Section VIII.

D. Distributors

44. Distributors in the U.K. include:

John West Foods Ltd.
54 Stanley Street, Liverpool 1

Princes Food Products Ltd.
P.O. Box 4
Liverpool L36 6AE

E. Import Duties and Regulations

1. Import Duties

45. Import duties for selected canned fish products entering the U.K. are shown in Table 3 together with preferential duties for certain groupings of countries of origin. Countries offered preferential import duties by the European Economic Community (EEC) under the Generalized System of Tariff Preferences (GSP) are listed in Appendix 3 as are the African, Caribbean and Pacific States (ACP's) associated with the EEC by the Lomé Convention. Member countries of the EEC and the European Free Trade Association (EFTA) are also given in Appendix 2.

46. With regard to imports of canned fish products into the U.K., Portugal has negotiated more favorable terms of duty than the other EFTA countries, and as a new member state of the EEC, Denmark has duty free entry to U.K. markets.

2. Import Regulations

(a) Description and Quality

47. There is no legislation concerned specifically with either frozen or canned fish. However, there is general food legislation concerned with quality, composition, marking and labelling, to which imported fish and fish products must conform.

Table 3. Import Duties on Canned Fish into the U.K.
(duties are a percentage of the c.i.f. value of goods imported)

Tariff heading/ Tariff no.	Full rate	EEC[1] rate	EFTA[2] rate	GSP[3] rate	ACP[4] rate
			(per cent)		
Salmon:					
1604 BI 1604 3010	6.1	0.5	5.6	4.8	free
Tuna:					
1604 EI 1604 7521	20.8	1.6	19.2	20	free
Mackerel:					
1604 FIII 1604 8363	22	2	20	16.8	free
Herring:					
1604 CII 6b 1604 5972	18	2	16 11.2(Portugal)	-	free
Pilchards & sardine	Clupea pilchardus and valbaum				
1604 D 1604 7158	22	2	20 12(Portugal)	-	free

1/ EEC - European Economic Community
2/ EFTA - European Free Trade Association
3/ GSP - Generalized System of Tariff Preferences
4/ ACP - African, Caribbean and Pacific States

48. The Trade Descriptions Act (1968) prohibits false descriptions of goods, services, accommodation and facilities provided in the course of trade. A trade description is defined in the Act as any statement relating to the quantity, size, method of manufacture, processing or conditioning, composition, place or date of manufacture and the person by whom the product was manufactured or produced. Under this Act, it is an offence for any person, in the course of trade, to apply a false trade description to any goods, or to supply or to offer to supply any goods to which a false trade description is applied.

49. The sale of food in the United Kingdom is controlled by the Food and Drug Act (1955). It is an offence to sell fish or fish products which are unfit for human consumption, or that fail to meet the sanitary requirements of the Imported Food Regulations (1968).

(b) Marking and Labelling

50. Fish and fish products are subject to compulsory marking and labelling in accordance with United Kingdom Law. The legal regulations contain a list of recognized retail trade names in English, together with the species of fish to which they apply.

51. Prepacked food must have a label securely attached to the container, clearly marked with the appropriate designation. If there is more than one ingredient, each one must be listed, in English, in descending order, by weight.

52. Goods bearing any false or misleading statements regarding place of manufacture, production, production processes used, country of origin, or trademarks will not be permitted entry into the United Kingdom.

53. For sales purposes, each species of fish must bear a particular name on its can label as follows:

Species	Name Required on Label
All species of *Thunnus* except *Thunnus alalunga* (Bonaterre)	Tuna or Tunny
All species of *Neothunnus* *Thunnus alalunga* (Bonaterre)	Albacore tuna

Species	Name Required on Label
All species of Sarda	Bonito tuna
All species of Euthynnus) Katsuwonus pelamis)	Skipjack tuna
Sardina pilchardus	Sardine
Sardinops spp.	Pilchard
Scomber spp.	Mackerel
Salmo salar) Oncorhynchus spp.)	Salmon

(c) Additives

54. The regulations allow the addition of tetracyclines to raw fish in the proportion of five parts per million. There are no regulations on additives for canned fish. Any food may also contain formaldehyde derived from wrapping materials or plastic containers, in any proportion not exceeding five parts per million.

(d) Storage

55. There are no regulations in the U.K. governing storage. However, imports must meet the sanitary requirements of the Imported Food Regulations. For practical purposes, the relevant advisory notices of the Torry Research Station are closely followed by U.K. importers.

(e) Cans

56. There are no regulations in the U.K. governing cans and the composition and thickness of the plate used.

(f) Standards

57. There are no national standards which apply specifically to canned fish. However, there are standards relating to the storage and packing of food, which may also apply to canned fish.

IV. THE CANNED FISH MARKET IN FRANCE

A. The Size and Composition of the Market

58. The canned fish market of France is the second largest in Europe and is supplied mostly by domestic production. Table 4 provides basic data to describe the market.

Table 4: France: Imports, Domestic Production & Exports of Canned Fish, 1969-1974

(Q - quantity in thousand metric tons
AV - average value in US$/metric ton)

(1) Salmon

	1969		1970		1971		1972		1973		1974	
	Q	AV	Q	AV	Q	AV	Q	AV	Q	AV	Q	AV
Imports	2.7	1212	2.1	1292	2.6	1266	3.9	1292	3.2	1571	2.2	2419

(Imports - apparent consumption)

(2) Tuna

	1969		1970		1971		1972		1973		1974	
	Q	AV	Q	AV	Q	AV	Q	AV	Q	AV	Q	AV
Imports	9.8	870	12.3	893	16.5	1129	12.4	1261	13.0	1485	15.0	1749
Production	26.2	n.a.	29.2	n.a.	38.9	n.a.	25.7	n.a.	21.8	n.a.	32.1	n.a.
Total	36.0	n.a.	41.5	n.a.	55.4	n.a.	38.1	n.a.	34.8	n.a.	47.1	n.a.
Exports	0.7	1500	0.6	1437	0.5	1897	0.7	1940	0.5	2332	0.9	2938
Apparent Consumption	35.3	n.a.	39.9	n.a.	54.9	n.a.	37.4	n.a.	34.3	n.a.	96.2	n.a.

Consumption corrected for year-end inventories:

1969	1970	1971	1972	1973	1974
n.a.	n.a.	n.a.	n.a.	38.0	39.1

(3) Mackerel

	1969		1970		1971		1972		1973		1974	
	Q	AV	Q	AV	Q	AV	Q	AV	Q	AV	Q	AV
Imports	2.0	492	1.9	492	1.8	496	1.5	548	1.7	632	1.2	807
Production	21.5	n.a.	24.2	n.a.	29.2	n.a.	27.2	n.a.	23.0	n.a.	27.6	n.a.
Total	23.5	n.a.	26.1	n.a.	31.0	n.a.	28.7	n.a.	24.7	n.a.	28.8	n.a.
Exports	0.8	491	1.1	509	0.6	625	1.2	600	0.9	747	1.9	839
Apparent Consumption	22.7	n.a.	25.0	n.a.	30.4	n.a.	27.5	n.a.	23.8	n.a.	27.1	n.a.

Corrected for year-end inventories:

1969	1970	1971	1972	1973	1974
n.a.	n.a.	n.a.	n.a.	24.9	27.2

(4) Herring

	1969		1970		1971		1972		1973		1974	
	Q	AV	Q	AV	Q	AV	Q	AV	Q	AV	Q	AV
Imports	4.1	502	3.0	567	2.8	656	2.6	781	2.6	938	2.4	1117
Production	2.2	n.a.	2.5	n.a.	3.0	n.a.	4.3	n.a.	2.0	n.a.	2.4	n.a.
Total	6.3	n.a.	5.5	n.a.	5.8	n.a.	6.9	n.a.	4.6	n.a.	4.8	n.a.

(Imports + domestic production = apparent consumption)

Corrected for year-end inventories:

1969	1970	1971	1972	1973	1974
n.a.	n.a.	n.a.	n.a.	5.6	5.2

(5) Pilchard

	1969		1970		1971		1972		1973		1974	
	Q	AV	Q	AV	Q	AV	Q	AV	Q	AV	Q	AV
Imports	0.4	427	0.3	475	0.3	500	0.3	588	0.2	833	0.5	780

(Imports = apparent consumption)

(6) Sardine

	1969		1970		1971		1972		1973		1974	
	Q	AV	Q	AV	Q	AV	Q	AV	Q	AV	Q	AV
Imports	10.2	759	14.0	804	10.3	845	11.6	897	15.5	1064	16.5	1119
Production	28.6	n.a.	28.2	n.a.	28.4	n.a.	27.6	n.a.	35.5	n.a.	31.4	n.a.
Total	38.8	n.a.	42.2	n.a.	38.7	n.a.	40.3	n.a.	41.0	n.a.	47.9	n.a.
Exports	0.2	1287	0.3	1067	0.2	1447	0.3	1348	0.3	1565	0.4	1667
Apparent Consumption	38.2	n.a.	41.9	n.a.	38.5	n.a.	40.0	n.a.	40.7	n.a.	47.5	n.a.

Consumption corrected for year-end inventories:

1969	1970	1971	1972	1973	1974
n.a.	n.a.	n.a.	n.a.	42.3	48.2

Source: FAO Yearbook of Fishery Statistics: Fishery Commodities Series, Foreign trade statistics of France and Chambre Syndicate Nationale des Industries de la Conserve.

59. Average annual per capita consumption of canned fish in France is reported to have increased slightly between 1965 and 1970; but since 1970 it has been at the same level (about 3 kgs.) and is expected to remain at that level to 1980 ("La Conserve et son Environment Economique", Boite Metal Promotion, 1975).

60. Looking at Table 4, it appears that the approximately constant average annual per capita consumption has been brought about by some stability in the total consumption of tuna and increases in total consumption of mackerel and sardine. Rastrelliger could be considered as a possible substitute for mackerel and sardine.

B. The Market for Canned Mackerel

1. Supplies

61. From Table 4, it can be seen that consumption of canned mackerel was 27,000 tons in 1974 compared with about 23,000 tons in 1969. Domestic production accounted for 96 per cent of supplies in 1974 and since 1969 the quantity of imports has fallen each year except in 1973. The domestic canning industry is supplied by domestic landings and by imports. In the last few

years, landings by France have declined (e.g. from 43,000 tons in 1969 to 40,000 tons in 1974) while the requirements of the canning industry have increased, bringing about an increase in imports, from 1,000 tons in 1969 to 12,000 tons in 1974. Imports are of both fresh (primarily from the U.K.) and frozen mackerel (from Poland and the Democratic Republic of Germany).

2. Product Form and Presentations

62. About 80 per cent of the canned mackerel produced in France is presented as a high quality product marinated in a wine sauce for use primarily as an hors d'oevre. Only some 13 per cent is in oil or tomato sauce and the remainder is in brine.

3. Consumption

63. Consumption of canned mackerel is not restricted exclusively to any particular age group but it is most popular, both on a per capita and on an absolute basis, in the 20-45 age group. The product is consumed widely in both rural and urban areas but particularly in towns with populations of over 10,000. Relatively little is consumed in the Mediterranean region.

4. Penetration of the Market

64. As in the U.K., Rastrelliger is a commercially unknown species and similarly it would not be permissible to market Rastrelliger under a "mackerel" label. In the "Normes de Fabrication" authorization is given for the manufacture of canned fish under the trade name "mackerel" only if it belongs to the species Scomber scombrus. However, canned fish products under trade names containing the term "Pilchard", other than species of the Clupeidae family are marketed under the following regulations: the precise (species) name of the fish in the can must be given and written on the label in the same sized lettering as that used for the product or trade name. It should be in the same color as, and on the same side of the can as product or trade name. Such a regulation may offer the opportunity for the qualified use of the trade name "mackerel".

65. The implications of these factors are the same in the French as in the U.K. market but differences between the two markets should be noted. The immediate difference, of course, is the comparative size of the two mackerel markets: the French market is estimated to be of about 27,000 tons per

annum, while the U.K. market is about 3,000 tons. This difference, however, is perhaps offset by the respective levels of imports into each of the markets (with the U.K. importing more than twice the volume as France) and the presentation requirements of the French market. Secondly, there is the importance of mackerel to the French canning industry and its increasing reliance on imports.

66. These factors are a basis for a discussion of the options theoretically open to an exporter of Rastrelliger. Two options are available: to export the frozen product for canning in France or to export a canned product.

67. The former option is considered to be the more difficult to implement successfully. Although the French canning industry has short-term supply difficulties (note the suspension in 1975 of the EEC external tariff on imported frozen mackerel, at the instigation of France), there is not likely to be a long term supply problem associated with the accepted species (Scomber scombrus). (It is assumed that if fishing for reduction in the English Channel and the approaches to the Channel reaches a high level of effort in relation to sustainable yield, the U.K. Government or ICES, as is appropriate at the time, will restrict fishing for reduction.) In the absence of an incentive, (stemming from supply problems with S. scombrus) to develop products based on Rastrelliger, the French canning industry is likely only to purchase Rastrelliger if a demonstrably acceptable product can be marketed profitably. From the canning interests interviewed, it seems unlikely that any canner would undertake market trials to develop a new product. In the immediate future, therefore, there seems little prospect of creating a market for frozen Rastrelliger for subsequent canning and introduction into the market as a supplement to Atlantic mackerel.

68. The remaining option is to develop sales of a canned product. The very small share of the market accounted for by imports and the "up market" product produced in the main by French canners does not create optimism that such sales can be developed. The key to the successful marketing of a Rastrelliger product, as in the U.K., is whether an acceptable product at a relatively low price can be produced.

C. Some Comparisons Between the Markets for Canned Sardine and Canned Mackerel

69. From a review of the statistics alone, the sardine sector of the canned fish market may be regarded as being more suited

to the introduction of Rastrelliger than is the mackerel sector. Consumption - at about 48,000 tons in 1974 - is about 75 per cent larger than that of canned mackerel and the market has been growing at a faster rate (Table 4). It can also be noted that imports of canned sardine account for about 35 per cent of supplies and are increasing, whereas imports of canned mackerel account for 4 per cent of supplies and are falling.

70. Another factor lending support to the marketing of small Rastrelliger as an alternative to canned sardine is the traditional presentation of canned sardine in the French market. Whereas mackerel is mainly produced in an exotic sauce, sardine in vegetable oil accounts for 75 per cent of the canned sardine market; 20 per cent is produced in tomato sauce and 5 per cent is packed in olive oil. There would be little difficulty in using these methods of packing in other countries.

71. Finally, it is apparent from Table 4 that sardine prices are consistently higher than mackerel prices. If supplies of a suitable size of fish are obtainable, the above quantitative comparisons are of themselves sufficient to justify a preliminary evaluation of a product that would compete with sardine. More qualitatively, however, the feeling among canned fish distributors is that it would be more difficult to launch a new product into the sardine sector of the market than it would be into the canned mackerel sector. The only qualitative basis available to the consultants to reinforce this view is that canned sardine, which is exclusively a Mediterranean fish, is much more popular in the older age groups of the population and in the rural and small towns than in the large urban areas. Consumers of sardine, therefore, are likely to be more conservative in their purchasing habits than those of canned mackerel, which appeals to a younger and more urbanized part of the population. On balance, therefore, it may well be that the canned mackerel market is the sector more likely to yield results although the canned sardine sector should not be ignored.

D. Assessment of the Possible Market for Rastrelliger

72. In view of the size of the canned fish market in France and the importance in the market of mackerel and sardine, it does not seem unrealistic, taking into account the factors described above, that an acceptable Rastrelliger product might be developed which would take a small share of the market. It is not possible to assess what share of the market it might take, but looking at the composition of the existing mackerel market, it would be prudent to suggest it might be rather below 10 per cent of mackerel sales, say, 2,000 tons. It has to be emphasized

also that to market a product with this level of sales, considerable development might be required.

73. As in the U.K., the first step to establishing whether Rastrelliger can be marketed is to submit existing products for evaluation to one or two major distributors, such as wholesalers or central purchasing offices of supermarket groups. If the indications are that a successful product can be developed, discussions can begin accordingly as a prelude to a marketing development program as outlined in Section VIII of this report.

E. Distributors

74. Distributors in France include:

"Courrier"
11, Rue Gaston Monmansseau, Paris

INNO France
4, Rue Paul Cezanne, Paris 8

AGRA Alimentation
29 Rue Foy, 75008, Paris

ABITBOL et Cie
132 bd de Paris, 13003 Marseille

UNICOMEX
31, rue de Mogador, 75009 Paris

G. SOREAU et Cie
62 rue Moliere, 842000 Ivry Sur Seine

S.G.C.C. (Coop)
61, rue Boissiere, 75116 Paris

SPAR
22 rue Marius Aufan, 92300 Levallois

S.N.A.I.R.
5, rue Cardinal Mercier, 75009 Paris

F. Import Duties and Regulations

1. Import Duties

75. Table 5 shows the duties on imports of canned fish products into the six original member countries of the EEC (France, Belgium, Netherlands, Luxembourg, Federal Republic of Germany, Italy).

76. Countries with agreements under the Generalized System of Tariff Preferences (GSP) are listed in Appendix 3, as are the African, Caribbean and Pacific countries (ACP's) associated with the EEC under the Lomé Convention, and the member countries of the European Free Trade Association (EFTA).

Table 5: Tariffs for Imports of Selected Canned Fish Products into the Original Six Member Countries of the EEC [1/]

	Full Rate	GSP Rate	ACP Rate	EFTA	Portugal
	------	(per cent)		----------	
Tariff heading					
1604 BI salmon	7	6	free	7	7
1604 EI tuna	24	24	free	24	16.8
1604 FIII mackerel	25	25	free	25	17.5
1604 CII G. herring	20	20	free	20 [2/]	14.0
1604 D pilchards & sardines	2.5	2.5	free	25	15.0

1/ Original member countries are: Belgium, France, Federal Republic of Germany, Italy, Luxembourg, and Netherlands.
2/ Suspension of herring at 12 per cent.
(Rates are in percentage of the cif value of imported goods)

2. Import Regulations

(a) Marking and Labelling

77. Fish and fish products are subject to mandatory marking and labelling requirements. The marking and labelling must be carried out by the producer or importer. Items must not be falsely

marked and labels must be very precisely worded. The following particulars must be indicated in French, in indelible lettering, and must be easily visible on the packages and containers of canned fish:

(i) Name and address of producer or distributor; in the latter case, the canning factory may be identified by a symbol;

(ii) The precise name (appellation officielle) of the fish, followed by the name and the type of canned product (e.g. sardine in tomato sauce), the precise details of how the product is presented and the parts of the animal included (e.g. skinless herring fillets in natural oil);

(iii) When the name does not reveal the composition, a list of ingredients presented in descending order of proportional quantities;

(iv) A qualitative description of the sauce or fluid in which the fish is canned (e.g. pure olive oil etc.) as appropriate;

(v) For imported products, the country of origin must be clearly shown in letters of not less than 4 mm. in height on the main part of the label;

(vi) The volume of the can in millilitres and the minimum total net weight (drained weight) of the contents in grams, conforming to specified can sizes; and

(vii) Date of production.

(b) Volume and Weight of Cans

78. The volume of cans and the drained weight of product for various species of fish are given in the following table.

Table 6. Volume of Cans and Minimum Drained Weight of Product, by Species

		Drained Weight of Product				
	Can Volume (ml.)	Sardines & other Clupeids including Herring	Herring Mackerel Pilchard (grams)	Mackerel Fillets	Tuna	Other Species
Rectangular base can						
1/15P	50	46	-	-	-	45
1/10P (Club 20)	75	69	-	-	-	67
1/8P	94	87	-	64	-	84
1/6P 25	125	115	122	85	-	112
Club 30	130	120	127	85	-	117
1/4P 30	187	173	183	127	-	168
1/3P 40	250	232	245	170	-	225
1/3P (sardines)	250	232	245	170	-	225
1/2P "	375	348	367	255	-	337
1/1P "	750	697	735	510	-	675
3/1P "	2250	2094	2205	-	-	2025
1/3P long	250	-	245	170	-	225
1/2P long	375	-	367	-	-	337
Circular base						
1/10 height	85	-	-	-	83	76
1/10 base	85	-	-	-	83	76
1/6 "	142	-	-	-	139	128
1/5	170	-	-	-	166	153
1/4 base	212	-	-	-	207	190
1/3	283	-	-	-	277	254
1/2 base	425	-	-	-	416	382
1/1 base	850	-	-	-	833	765
32/10 (or 3 kg. tuna)	2720	-	-	-	2665	2448
53/10 (or 5 kg. tuna)	4505	-	-	-	4415	4054
Oval Base						
1/6P (round fish	125	115	122	-	115	112
1/2P (Pilchards)	375	-	367	-	-	337
1/1P (Pilchards)	750	-	735	-	-	675

V. THE CANNED FISH MARKET IN ITALY

A. The Size and Composition of the Market

79. Like the market in France, the market in Italy has a heavy bias towards domestic production. Unlike the French market, the Italian market is comprised mostly of tuna, which accounts for about 75 per cent of consumption of canned fish. Table 7 below provides basic data to describe the market.

Table 7: Italy: Imports, Domestic Production and Exports of Canned Fish, 1969-1974

(Q = quantity in thousand metric tons
AV = average value in US$/ton)

(1) Tuna

	1969		1970		1971		1972		1973		1974	
	Q	AV	Q	AV	Q	AV	Q	AV	Q	AV	Q	AV
Imports	3.8	906	3.0	963	2.5	1123	2.3	1100	2.7	1296	6.0	1336
Production	36.0	n.a.	36.2	n.a.	37.0	n.a.	36.5	n.a.	37.5	n.a.	38.9	n.a.
Total	39.8	n.a.	39.2	n.a.	39.5	n.a.	38.8	n.a.	40.2	n.a.	44.9	n.a.
Exports	0.3	1113	0.5	1198	0.7	1429	2.1	1130	2.2	1322	3.9	1591
Consumption	39.5	n.a.	38.7	n.a.	38.8	n.a.	36.7	n.a.	38.0	n.a.	41.0	n.a.

(2) Mackerel

Imports	9.1	480	7.8	520	8.6	516	9.4	560	11.4	666	8.1	1084

(3) Sardine

Imports	4.9	548	2.7	621	2.5	727	3.0	732	4.5	832	4.9	952
Production	-	-	-	-	-	-	-	-	-	-	-	-
Exports	0.2	839	0.1	956	0.1	1128	0.1	1615	0.1	1416	0.2	1841
Consumption	4.7	n.a.	2.6	n.a.	2.4	n.a.	2.9	n.a.	4.4	n.a.	4.7	n.a.

(4) Salmon

(Imports are less than 1,000 tons annually.)

80. As Table 7 makes clear, the Italian market is dominated by domestically produced canned tuna, acoounting for 75 per cent of supplies of canned fish, while sardine and mackerel, imported primarily from Portugal and Spain, account for 8 and 12 per cent respectively. Some 75 per cent of all canned fish is marketed under heavily promoted brand names which have a high degree of consumer loyalty. The remaining supplies passing into consumption are cheaper and not promoted; they are said to be usually of lower quality than the promoted brands, although this was not verified by the consultants.

81. Consumption of all canned fish is considerably higher in the industrialized north of the country than elsewhere. Canned tuna and mackerel are eaten as the main part of a meal and canned sardine as antipasto. With respect to purchasesby income groups, canned tuna is purchased by the middle-and upper-income groups while canned mackerel tends to be consumed more by the middle-and-lower income groups.

B. The Market Outlook

82. Canners regard the domestic market for canned tuna as being almost, if not fully, satisfied at the present level of supplies and levels of real income. It is felt that further significant expansion will depend on increases in disposable income, primarily in central and southern Italy. Mackerel and sardine, which are both well-established in the market and available at significantly lower prices than tuna, may be thought to have a better outlook for expanded sales. Indeed, as Table 7 shows, the apparent consumption of sardine has increased from 2,400 tons in 1971 to 4,700 tons in 1974. Despite this increase in sales, the industry appears to be pessimistic towards significantly increased sales. So far as canned mackerel is concerned, the consensus of canners' views is that the product occupies a lower niche in the market than tuna, but that, nevertheless, the factors determining tuna sales also determine those of mackerel.

83. It may be suspected that these views of the market reflect a situation in which there has been strong demand for tuna by the expanding middle-and upper-income groups, and, consequently, all marketing energies have been directed at promoting one brand of tuna against another, primarily to acquire as large a share of the market as possible and, indirectly, to expand the total market for tuna. In consequence, little or no marketing attention has been paid to other products. It is therefore difficult for an observer to judge whether active marketing of products such as mackerel would result in an appreciable expansion of sales.

C. Assessment of the Possible Market for Rastrelliger

84. As the Italian food regulations stand at present, it would not be permissible to market Rastrelliger as a sardine. The regulations regarding labelling, however, appear to be concerned only with tuna, bonito and sardine; there appears to be no legal reason why Rastrelliger should not be labelled and marketed as mackerel. Because of the conservatism of the market, it appears quite certain that few if any distributors would wish to concern themselves with the product if it could not be labelled and sold as mackerel.

85. From Table 2, it can be seen that mackerel sales in recent years have been relatively stable. A substitute for mackerel, therefore, will have to win a share of an existing market on the basis of acceptable taste and quality. So far as price is concerned, the average c.i.f. price of mackerel from Portugal in 1975 was $1,279/ton on which was levied a negotiated EEC external duty of 17 per cent.

86. Imports from the South China Sea region would be required to pay the full external duty of 25 per cent. To compete in the market, it may be necessary to price canned Rastrelliger 25-30 per cent below the equivalent price (c.i.f. price plus duty) of mackerel from Portugal, suggesting a c.i.f. price for Rastrelliger of $1,050-1,125 per ton (including duty).

87. On the basis that the product can be labelled and sold as mackerel and imported at a price about 30 per cent below that of Portuguese mackerel, a number of Italian distributors would be interested in receiving samples of the product (packed in vegetable oil as are the existing mackerel imports) for preliminary evaluation. The conservatism of the market, however, inhibits any attempt to make an initial "guesstimate" of what sales might be in the foreseeable future.

D. Distributors

88. Distributors in Italy include:

Consorcio Espanol Conservero Soc. An. Ital.
Via Gramsci 29-4 Genoa

Florio Tonnare di Favignana e Fromica S.p.A.
Via Gramsci 3/4, Genoa

Petro (Ditta Enrico Musso di)
Via Gramsci 21/4, Genoa

S. A. L. A.
Via Gramsci 29-9, Genoa

E. Import Duties and Regulations

1. Import Duties

Import duties are the same as for France (see Section IV-F).

2. Import Regulations

(a) Summary

89. All imported fish food products (fish, fish eggs, mollusks and crustaceans) preserved in cans or in other packaging must be accompanied by a health certificate carrying the stamp of the appropriate government authority of the country of origin. The certificate must show that the product has been processed in hygienic conditions and subjected to an effective sterilization process where the preparation of the product allows for such processing.

90. All cans and packaging must bear the following specific details:

(i) Name of the product;
(ii) Quality of oil and other substances used for preservation;
(iii) Net weight of the contents;
(iv) Name of the producer; and
(v) Place of production.

91. The above information must be displayed prominently or printed in indelible ink on metal packaging, or burnt onto wooden packaging or embossed on glass. A mark or initials which will permit identification may be substituted for the name of the product and the place of production, provided it is clearly and indelibly stamped on the bottom of the packaging. In such cases, the other details may be attached on cardboard labels around the package.

92. Any labels, tickets or other identification marks or signs placed on the packaging must not cover up or conceal the details referred to above nor must they contradict them.

93. All the abovementioned details must be reproduced on any wrapping with which the primary packaging may eventually be covered.

(b) Mercury Tolerance for Fish and Fish Products

94. The importer must produce an attestation, based on a laboratory certificate approved by the competent authorities of the country of origin of the goods, that the mercury content of the imported goods does not exceed 0.7 parts per million for frozen tuna fish and 1.0 parts per million for canned tuna fish. The certificate is an integral part of the health attestation mentioned above.

95. Determination of the mercury content for the purposes of the above attestation should be made as specified in the Official Gazette No. 328 of 28 December 1971, which sets out the accepted mercury tolerance levels for imported fish and fish products. If any such products are presented for importation without the necessary attestation or with irregular attestations, competent health authorities will carry out an analytical inspection in accordance with the instructions of the Ministry of Health.

96. The dry-wet conversion factors to be applied to finished tuna and fish products which may have suffered a loss of weight in relation to the original product, in order to determine the mercury content, are given below:

In brine	-	0.50
Salted	-	0.40
Dried	-	0.35
Smoked	-	0.40
Canned		
Thunnus thynnus	-	0.60
Other tunny	-	0.70
Other products	-	0.65

VI. THE CANNED FISH MARKET IN THE FEDERAL REPUBLIC OF GERMANY

A. The Size and Composition of the Market

97. The German market is the largest of the European country markets for canned fish. Unlike any of the other markets reviewed in this study (but similar to that of Sweden) the German market is dominated by herring. Most of the canned herring is produced in Germany. Tuna is the principal imported canned fish. Table 8 below contains estimates of apparent consumption of the most important canned fish.

Table 8: Germany: Imports, Production, Exports and Apparent Consumption of Canned Fish, 1969-1974

(Q = quantity in thousand metric tons
AV = average value in US$/ton)

(1) Herring

	1969		1970		1971		1972		1973		1974	
	Q	AV	Q	AV	Q	AV	Q	AV	Q	AV	Q	AV
Imports	2.7	500	3.1	570	5.9	500	6.1	580	7.8	814	8.9	1029
Production	134.0	n.a.	128.8	n.a.	118.2	n.a.	120.8	n.a.	124.5	n.a.	119.4	n.a.
Total	136.7	n.a.	131.9	n.a.	124.1	n.a.	126.9	n.a.	132.3	n.a.	128.1	n.a.
Exports	8.8	765	8.1	918	6.9	989	5.5	1080	6.8	1296	6.3	1600
Apparent Consumption	127.9	n.a.	123.8	n.a.	117.2	n.a.	121.4	n.a.	125.5	n.a.	121.8	n.a.

(2) Tuna

	1969		1970		1971		1972		1973		1974	
	Q	AV	Q	AV	Q	AV	Q	AV	Q	AV	Q	AV
Imports	15.1	798	15.0	961	10.2	1057	14.7	1216	15.3	1527	9.3	1713
Exports	-	-	-	-	1.7	1130	2.5	1338	2.9	1937	0.3	2014
Apparent Consumption	15.1	798	15.0	961	8.5	n.a.	12.2	n.a.	12.2	n.a.	9.0	n.a.

(3) Sardine

	1969		1970		1971		1972		1973		1974	
	Q	AV	Q	AV	Q	AV	Q	AV	Q	AV	Q	AV
Imports	10.3	970	7.4	1140	8.6	1190	10.0	1270	11.6	1400	9.2	1750
Exports	-	-	-	-	-	-	-	-	0.5	1390	0.2	1170
Apparent Consumption	10.3	970	7.4	1140	8.6	1190	10.0	1270	11.1	n.a.	9.0	n.a.

(4) Mackerel

	1969		1970		1971		1972		1973		1974	
	Q	AV	Q	AV	Q	AV	Q	AV	Q	AV	Q	AV
Imports	1.1	630	3.8	700	3.4	710	5.1	770	4.2	916	3.7	1250
Exports	-	-	-	-	-	-	0.2	730	0.4	990	0.8	1020
Apparent Consumption	1.1	630	3.8	700	3.4	710	4.9	n.a.	3.8	n.a.	2.9	n.a.

98. The consumption of herring appears to be stable at 120,000-125,000 tons a year. Imports have been increasing steadily in importance in recent years, from less than 3,000 tons in 1969 to almost 9,000 tons in 1974, but still accounted for less than 7 per cent of all supplies. Canada is the most important supplier of these imports, with Netherlands, Norway and Sweden also exporting to Germany. German exports have tended to decline slightly in recent years from 8,800 tons in 1969 to 6,300 tons in 1974. France is the principal market for German exports of canned herring; recently average prices have been relatively high (Table 8).

99. Tuna, sardine and mackerel are all imported. All told, the aggregated apparent consumption in 1974 of these three commodities amounted to only 17 per cent of the apparent consumption of canned herring. Since 1969, this aggregated consumption, in absolute terms, has stayed relatively stable at about 26,000 tons a year, except in 1971 and 1974 when consumption fell to just under 21,000 tons due to sharp drops in the apparent consumption of tuna in these years. The reason for the 1971 decrease is not certain but there is no doubt that the decline in 1974 was the result of a highly price elastic market responding to a sharp increase in the price of tuna.

100. Over the period 1969-74, apparent consumption of sardine has been relatively steady at about 10,000 tons a year. The only commodity for which a rising trend of apparent consumption can be shown is mackerel. Until 1974, Japan was the main supplier of canned mackerel but the highly price sensitive nature of the market caused a switch in that year away from Japan to Yugoslavia, whose mackerel price was 25 per cent less than that of Japan.

B. The Price Elasticity of Demand

101. To help judge future developments in the German canned fish market, it is useful to examine what evidence there is concerning differences in price elasticities of demand for different canned fish products.

102. Historically, two commodities, herring and sardine, have been important in the German canned fish market. Of the two, herring is by far the most popular, with an annual consumption some twelve times larger than that of sardine. Tuna is a relative newcomer to the German market, having been established only in the last 20 years. However, many consumers prefer tuna to other canned fish and it has had a relatively rapid growth in sales and market share. Canned mackerel on the other hand, has only become established in the last few years.

103. In Germany, canned fish is eaten primarily as a supper dish; substitutes are meat and dairy products. Major canned fish distributors accept that housewives are more price conscious with regard to the supper meal than any other, and consequently, canned fish is regarded as being one of the most price sensitive commodity groups in the German food market. It is difficult to attribute particular significance to the inherent acceptability of a product - manifested perhaps, like herring, in its strong historical basis, or to the price of a particular canned product compared with prices of other canned fish and substitutes. There is little doubt, however, that combinations of these two factors have brought about quite different price elasticities for herring and tuna. Without entering into the quantification of these differences (indeed, better data and longer time series of data than are available would be required to provide more substantiated evidence), from Table 8 it seems most likely that since 1969 both tuna and herring have had price increases of the same order but the response to these increases has been a very slight erosion of sales of herring -- less than 4 per cent, and a major fall in sales of tuna -- more than 40 per cent.

104. At a lower level of sales, which is perhaps commensurate with its relatively higher price, sardine, too, appears not to have been particularly adversely affected as a result of its increase in price. (The consumption-price history of sardine, in conjunction with that of herring and tuna, allows us to suggest, albeit tentatively, that the historical factor, which has been referred to earlier, may have been important in keeping sardine sales reasonably buoyant.)

105. Mackerel (Table 8) can be seen to have had an erratic but high average annual growth in sales between 1969 and 1972, and consecutive declines in sales in 1973 and 1974. Little consideration appears to have been given by canned fish distributors to the factors governing sales of mackerel, but it may well be that demand for it is as price elastic as is the demand for tuna.

C. The Market Outlook

106. Apart from decreases in apparent consumption in 1971 and 1974, consumption of all canned fish has been in the range of 150-155,000 tons per year, suggesting a slight decline in average annual per capita usage.

107. Provided the relative prices of canned fish versus competitive foods do not change radically, this level of total annual apparent consumption might be expected to be maintained, given the availability of supplies.

108. Doubts have been expressed by a number of canners and distributors in Germany regarding the future availability of herring at a price acceptable to German consumers and in sufficient quantity to maintain existing sales levels. On the past record, however, sales of canned herring have been resilient in recent years as prices have increased; consequently, only if herring prices move much closer than at present to those of other canned fish does it seem likely that there would be a significant fall in sales. (It may be, however, that the historical factor, referred to above, would cushion this fall and sales would remain near their present level.)

109. If, therefore, total consumption even the next few years does not increase significantly over, say, 150,000 tons, and of this total, herring accounts for 120-125,000 tons, other canned fish products may be expected to compete for the 25-30,000 tons comprising the remainder of the market. Of this balance, it seems prudent to ascribe some 10,000 tons to sardine; consumption of canned sardines has remained relatively stable over the last few years.

110. Perhaps the most likely situation over the next few years, therefore, is one where tuna and mackerel is sold in a residual market of, say 15-20,000 tons, this residual falling to 10-12,000 tons when prices and economic conditions are particularly adverse, as in 1974-75.

D. Assessment of the Possible Market for Rastrelliger

111. Nomenclature regulations prevent the marketing of Rastrelliger in Germany as sardine, but not as mackerel. It is suggested, therefore, that the most likely immediate market in Germany for Rastrelliger is as a mackerel substitute.

112. As in the other European country markets, however, Rastrelliger is a commercially unknown product and a preliminary evaluation by a number of canned fish distributors would be necessary before judging the market acceptability of a Rastrelliger product.

113. If Rastrelliger is found to be an adequate substitute for mackerel, and could be marketed at 25-30 per cent below the price of Scomber mackerel, it might be possible to achieve a sales level of perhaps 30-40 per cent of mackerel sales in 1972, i.e. 2,000 tons. Clearly, if the prices of tuna and herring increase relative to any substitute product, including Rastrelliger, it may be expected that the substitute product would benefit accordingly.

E. Distribution

114. Imports are either made directly by central purchasing organizations acting on behalf of a group of stores, e.g. the Coop stores importing through a central purchasing office, or through import companies. The latter is the preferred method for most retail outlets and it is estimated that about 80 per cent of canned fish imports are channeled through companies which have overseas contacts, are geared to the trade and operate on small margins. Such companies usually handle many different brands at once.

F. Distributors

115. Distributors in the Federal Republic of Germany include:

Edeka Zentrale A. G.,
2000 Hamburg 60, New York Ring 6

Forum bmbH
2 Hamburg, Besenbinderhof 43

G. Import Duties and Regulations

1. Import Duties

116. As for France, see Section IV-F.

2. Import Regulations

(a) Summary

117. There is no legislation in the Federal Republic dealing specifically with canned fish. However, it is an offence to put into circulation any fish product containing more than 1ppm of mercury; a veterinary certificate is required to this effect (Order on the Maximum Level of Mercury in Fish Crustacea and Mollusks (Mercury Order, Fish) of 6 February 1975). A law is now in preparation for the examination of fresh fish at ports; upon its completion in two or three years, it is likely to be extended to the examination of all fish products. Imported fish and fish products must conform to general food legislation concerning quality, composition, marking and labelling.

118. The directive on fish and fish products lays down requirements for fresh fish, canned fish and other fish products. It covers most fish species, but excludes shrimp and prawns. It contains provisions regarding the composition of fish and by-products that may be placed in containers. The coloring order lists the foreign substances that may be added for the coloring of foodstuffs. The preservation order specifies the foreign substances that may be used as additives to preserve food. A foodstuffs marking order specifies the labelling and marking requirements for foodstuffs that are to be offered for sale in the Federal Republic. The directive on lacquers and varnishes for food containers and packages lays down requirements concerning such products, which must conform to the provisions of the Food Law.

(b) Marking and Labelling

119. Marking or labelling must be carried out by the producer or by the person who imports the product, as well as by any person wishing to place the product on the market under his name or under the name of his firm.

120. The general law requires that items should not be marked misleadingly and that labels should be very clearly worded.

121. Nomenclature regulations concerning the trade-name "mackerel" are not clear. It is likely that a trade name such as "chub mackerel" would be allowed as long as the specific name is also given.

122. The following particulars must be written in German and be easily visible on the packages or containers:

(i) Name of the firm and location of the manufacturer's trading head office. If the office is in a foreign country but the foodstuff is produced in the Federal Republic, the place of production must also be shown in the following manner: "Hergestellt in ...." (produced in ....). If a person other than the producer distributes the products under his own name or that of his firm, then that name must be shown on the packing or container;

(ii) Description of contents, with metric weight and measurements;

(iii) Time of manufacture (not in code) of the foodstuffs in terms of day, month and year; or time of packaging or filling if the foodstuffs have not been packed or filled for the purpose of delivery to the consumer, or were not packed or filled immediately after the time of manufacture. These details may be omitted provided that the time (not in code) up to which the foodstuffs are durable is indicated in terms of day, month and year;

(iv) Storage temperature, together with details of the storage period, i.e. how long a product will keep, in the case of frozen fish of fish products;

(v) If non-standard container sizes are used, the unit price (price per kg. etc.) as well as the price per pack;

(vi) Mercury content; this must be indicated by food processors on labels or packages containing fish products. Local regulations limit mercury content; some provincial regulations prohibit a mercury content in excess of 0.5 per million. As mentioned above, a veterinary certificate specifying the mercury content is required from the country of origin.

Without such marking and labelling, packages and containers of foodstuffs may not be sold or offered for sale, or otherwise distributed.

(c) Additives

123. The preservatives order permits the addition of "ascorbic acid", "benzoic acid" and "PHB-ester" in specified proportions to certain types of fish and fish products.

(d) Can Sizes

124. There are no mandatory provisions concerning can sizes for fish, but the national standards (DIN) governing these sizes may be regarded as recommended, as they are usually followed by domestic food manufacturers. An extract from DIN 2044 on can standards is cited below.

Cans for Fish Products: Drawn and Seamed (in cm.)

Rectangular cans for fish products:	A82 x 57 x 17
Rectangular cans for fish products:	A100 x 58 x height
Rectangular cans for fish products:	A105 x 73 x height lid bottom for cans
Rectangular cans for fish products:	A123 x 76 x height lid bottom for cans
Rectangular cans for fish products:	A179 x 109 x 47
Rectangular cans for fish products:	A219 x 159 x height
Rectangular cans for fish products:	A240 x 230 x height
Oval cans for fish products:	B128 x 77 x 24
Pointed oval cans for fish products:	B148 x 81 x height
Pointed oval cans for fish products:	B160 x 107 x 34
Blunt oval cans for fish products:	C135 x 76 x 24.5
Round-ended oblong cans for fish products:	D148 x 81 x height
Round-ended oblong cans for fish products	D150 x 54 x height
Lids for cans: round-ended oblong	D210 x 80 x height

125. There are no mandatory provisions concerning the composition and thickness of tin plate used for food containers, but there are mandatory requirements relating to lacquers and varnishes for use on food containers and packages.

VII. THE CANNED FISH MARKET IN BELGIUM AND LUXEMBOURG

A. The Size and Composition of the Market

126. Belgium/Luxembourg is a relatively small country market for canned fish; but at about 18,000 tons [1] in 1974, it is worth some consideration as a possible market for Rastrelliger because of the variety canned fish in the market and the importance of mackerel. Table 9 below shows estimates of annual apparent consumption of canned fish in Belgium during 1969-74.

Table 9: Belgium/Luxembourg: Production, Imports, Exports and Apparent Consumption of Canned Fish, 1969 - 1974

(Q = quantity in thousand metric tons
AV = average value in US$/ton)

(1) Mackerel

	1969		1970		1971		1972		1973		1974	
	Q	AV	Q	AV	Q	AV	Q	AV	Q	AV	Q	AV
Imports	4.0	707	4.0	699	5.2	739	4.5	823	4.2	1078	4.7	1509
Production	0.4	n.a.	0.4	n.a.	-	-	0.3	n.a.	0.2	n.a.	0.2	n.a.
Apparent Consumption	4.4	n.a.	4.4	n.a.	5.2	n.a.	4.8	n.a.	4.4	n.a.	4.9	n.a.

(2) Salmon

	1969		1970		1971		1972		1973		1974	
	Q	AV	Q	AV	Q	AV	Q	AV	Q	AV	Q	AV
Imports	4.1	1310	2.3	1486	3.5	1667	3.3	1639	3.3	2189	2.9	3196

(Imports = apparent consumption)

(3) Tuna

	1969		1970		1971		1972		1973		1974	
	Q	AV	Q	AV	Q	AV	Q	AV	Q	AV	Q	AV
Imports	3.5	792	3.4	880	3.9	932	3.6	1145	4.0	1414	3.6	1807

(Imports = apparent consumption)

1/ Imports of pilchard are not reported but are assumed to be about 2,000 tons.

(4) Sardine

	1969		1970		1971		1972		1973		1974	
	Q	AV	Q	AV	Q	AV	Q	AV	Q	AV	Q	AV
Imports	3.1	728	2.9	864	3.8	964	3.0	1049	3.3	1238	3.8	1425

(Imports = apparent consumption)

(5) Pilchard

	1969		1970		1971		1972		1973		1974	
	Q	AV	Q	AV	Q	AV	Q	AV	Q	AV	Q	AV
Imports	3.1	420	2.5	465	1.5	548	3.0	683	n.a.	n.a.	n.a.	n.a.

(Imports = apparent consumption)

(6) Herring

	1969		1970		1971		1972		1973		1974	
	Q	AV	Q	AV	Q	AV	Q	AV	Q	AV	Q	AV
Imports	1.1	542	0.8	653	0.8	697	1.0	713	0.7	1219	0.8	1432
Production	0.7	n.a.	0.8	n.a.	1.0	n.a.	1.0	n.a.	0.9	n.a.	0.4	n.a.
Total Supply	1.8	n.a.	1.6	n.a.	1.8	n.a.	2.0	n.a.	1.6	n.a.	1.2	n.a.
Exports	0.2	575	0.2	666	0.2	814	0.4	922	0.9	1194	0.6	1486
Apparent Consumption	1.6	n.a.	1.4	n.a.	1.6	n.a.	1.6	n.a.	0.5	n.a.	0.6	n.a.

127. Total apparent consumption of canned fish was between 19,000 and 20,000 metric tons a year for the years 1970-72; in 1969, it was just under 17,000 metric tons.

128. There is some doubt as to total consumption in 1973 and 1974 because of the lack of import data for pilchard. Excluding pilchard, total imports were between 15,000 and 16,000 metric tons a year, a level similar to total imports exclusive of pilchard in the immediately preceding years.

129. As may be seen from Table 9, mackerel accounts for the largest single commodity share of the market. It is imported

mainly from Japan, but imports are also recorded from Portugal, Norway and Morocco. The product form is both fillets, skin-on or off, and steaks packed in natural oil or brine.

130. Tuna and sardine are second in popularity to mackerel and are also similar in sales volume to each other. Tuna is imported mainly from Japan, but also from Yugoslavia and the USSR, while sardine is imported from Portugal and Morocco. As in France, the preference in Belgium is for light meat tuna which is packed in olive oil or in salad dressing. Similarly, sardine in olive oil is most popular.

B. Assessment of the Possible Market for Rastrelliger

131. There is little that can be said about the Belgian market that has not been stated earlier about other country markets. The commodity which Rastrelliger is most likely to compete with as a substitute is Scomber mackerel. Interviews with distributors yielded little positive interest but, as in other country markets, judgment about the likelihood of a successful penetration of the market would be dependent upon the results of preliminary appraisals of a range of products by a number of distributors.

132. Should a suitable product be developed, it would probably be marketed in Belgium subsequent to market development for one or more of the larger country markets.

C. Distributors

133. Canned fish is imported by import agents and directly by supermarket groups. Supermarket groups are:

Delhaize, Brussels

Sarma
8 Rue d'Argent, Brussels

An import agent is:

G. B. Inno
20 Av. des Olympiades, 1140 Brussels

The major Belgian canning company which also imports canned fish is United Foods, Ostend.

D. Import Duties and Regulations

1. Import Duties

134. As for France, see Section IV-F.

2. Import Regulations

135. Canned fish products for sale or delivery must be clearly labelled with the name and address of the canner, plus identification of the wholesaler/distributor. The species of fish, and as appropriate, the type of oil/sauce in which the product is canned (e.g. sardine in tomato sauce) must be indicated, together with specifications of additives other than those legally acceptable.

VIII. PROCEDURES FOR INTRODUCING RASTRELLIGER INTO EUROPEAN MARKETS

136. Mackerel of the genus Rastrelliger - frequently referred to in the literature as chub mackerel - differ considerably from Scomber scombrus (the Atlantic mackerel) in that they are a shorter but relatively deeper-bodied fish. Although Rastrelliger is closely related to the Atlantic mackerel and is of comparable eating quality, it is not known on established European markets and, primarily because of differences in appearance, it would be extremely difficult if not impossible to introduce the species successfully to traditional and conservative fresh/frozen whole fish markets in Europe. In the consultant's view, there would undoubtedly be considerable resistance to any such introduction both from the fish trade and from the consumer. There is an added problem in that Rastrelliger spp. could not be sold under the name "mackerel" in countries such as France and U.K. since all species of fish and shellfish are statutorily designated. However, as suggested previously, it may well be possible to successfully market Rastrelliger in Europe as a canned product.

137. Considerable penetration of the canned fish market has already been achieved by the Japanese and others using Scomber japonicus (the Pacific mackerel) and belief in the potential was recently expressed by a representative of a leading European fish canner who, in discussions with the consultants, stated that in his opinion the market for canned mackerel is poised for considerable growth - probably at the expense of tuna and primarily on price grounds.

138. In this context, it should, of course, be borne in mind that near-water stocks of Atlantic mackerel - particularly those in the English Channel - are considered capable of sustaining further exploitation; additionally, Japanese penetration of the market is expected to continue. Nevertheless, the consultants consider that, provided the price is competitive and that canned products based on Rastrelliger spp. are carefully prepared to meet European market requirements, there would be a reasonable chance of successfully exploiting appropriate niches in the European market for canned "oily type" fish products.

139. The importance of conducting a carefully planned program for the introduction of Rastrelliger based products cannot be over emphasized. The consultants consider that the following steps would need to be taken in a logical sequential order.

1. Identification of Target Countries

140. Target countries should be identified for the introduction of selected products on a test basis. These will likely be the countries mentioned earlier (i.e. Germany, France, U.K), where the present utilization of canned "oily type" fish products is extensive and is likely to grow. The nature and form of the various canned fish products sold in these markets should be closely examined in order to identify the most appropriate opportunities (i.e. can size and shape, fillets or steaks, desirable sauces, prices, etc.).

2. Existing Rastrelliger Based Products

141. The existing range of canned Rastrelliger should be examined to establish which, if any, might be suitable for introduction to the target country markets identified - either in improved or existing form. Since Rastrelliger spp. from the East Indian Ocean region are already canned in various forms (e.g. in Thailand as conventional mackerel steaks in vegetable oil and on the west coast of Malaysia as "sardines" in tomato sauce) it would be sensible to establish just how closely any of these measure up to European requirements. Indeed, some of the available Rastrelliger products may be considered entirely appropriate as they stand; others may require only minor modification or improvement.

3. Product Development

142. A programe of product development will almost certainly be necessary either to modify or improve existing canned Rastrelliger products on the one hand, or to complement the range with new products on the other. For the most part, canned mackerel is sold in Europe as steaks in vegetable or mackerel oil in the conventional 220 g. cylindrical can. Mackerel may also be sold as fillets in various sauces (e.g. tomato, mustard sauce) or as cold smoked fillets in 200 g. oval cans. A further product which is increasingly popular is mackerel paté, which may also be canned. With development, Rastrelliger could be suitably canned in any of these forms but, bearing in

mind that manufacturers will not necessarily be able to sell canned Rastrelliger as mackerel (this will depend on the labelling regulations of selected target countries), the possibility of introducing canned Rastrelliger as a general contender in the canned oily fish field should not be overlooked.

143. As has been mentioned previously, whole Rastrelliger in tomato sauce (as produced in Malaysia) can be considered a contender in the canned sardine market. The program of product development must be approached with an open mind and all efforts should not necessarily be placed on the duplication of existing mackerel products.

144. Such a program should preferably be carried out in conjunction with a commercial fish canner since an eye must be kept at all times on the commercial and technical viability of the products developed or improved. For instance, due regard will have to be paid to the feasibility of canning in Europe - this may not be possible since mackerel is not noted for its stability in the frozen state, hence large scale commercial canning may have to be done in the Far East. At the same time, the product development facilities must necessarily be comprehensive since not only product acceptability and profitability must be taken into account but also aspects such as choice of can (including flexible foil packs), quality standards, microbiology and product wholesomeness, together with the requisite food standards of the target country(ies), which might embrace additives, coloring matters, etc.

145. In brief, the aim of the product development program should be to produce a limited number of prototype canned products which can be produced to a repetitive specification and which are so designed to ensure a high degree of acceptability in the target market(s). Sufficient products must be produced through pilot scale factory runs to enable the conduct of group discussion and placement tests.

4. Group Discussions

146. The most promising - say, four or five - prototype canned Rastrelliger products should be subjected to consumer group discussions in a number of centres in the target country(ies). The centres should be selected as being representative both geographically and socio-economically. The purpose of group discussions

is to allow a number of consumers or potential consumers to gather informally to discuss at length their experiences, attitudes and opinions relative both to the concept of canned fish generally and to the prototype Rastrelliger products specifically. The results of the group discussions (after analysis of the taped proceedings) will indicate the nature of housewife reaction towards the proposed products, indicate the most and least popular in the range offered, indicate any necessary modifications either in the recipe or presentation, provide suggested names and materials for launching and advertising purposes and indicate the order of price the consumers are prepared to pay. In the canned Rastrelliger context the following topics would be discussed.

(i) attitudes towards the use of canned fish;
(ii) advantages/disadvantages seen in various canned fish products;
(iii) overall reaction to the prototype products in concept, in actual unprepared form and in prepared form;
(iv) reaction to specific physical aspects - size, color, shape, smell, keeping qualities, texture, palatability, etc.;
(v) product associations;
(vi) attitudes to and suggestions for possible product names;
(vii) likely use of such products - whether likely to use, who would use, on what occasions, etc.;
(viii) price expectations.

147. Housewives for the group discussions should be selected on the basis that they are regular users of canned fish. The results should indicate which products are worth progressing further and indicate whether these are right for the next stage of full-scale testing, or, if not, what modifications are necessary before moving on to this stage.

5. Home Placement Tests

148. Following group discussions, home placement tests can be carried out with the most favored canned Rastrelliger products to establish consumer reaction to these under home conditions. These will provide additional information and complement that already derived from the group discussions, as well as assist in designing the full-scale market test and the range of products to be sold.

149. For the home placement tests, a representative sample of housewives should be selected, broadly representative by class, age and area of the target country(ies). Each housewife should be given two cans of each Rastrelliger product (if there are more than two products then the housewife sample will necessarily have to be larger) to take over a period of about 10 days. Half the housewives should be told what the products are below testing them, the other half should not. This will indicate the influence of pre-knowledge of the canned fish based on consumers attitudes to the products.

150. A home placement test should be conducted in two stages:

(i) Placement of the Products - at which time basic information should be obtained covering usage of canned fish products, advantages/disadvantages of such products, attitude to the concept of Rastrelliger products, anticipated advantages/disadvantages and the type of person/occasion expect to use such canned fish.

(ii) Recall After Use - at which time information should be obtained on how the product was prepared and used, attitudes regarding preparation, the occasion on which it was used, how it was eaten and who ate it. Additionally, overall reaction to the product, perceived advantages/disadvantages, reaction to specific aspects, the opinions of other members of the family, as well as the likelihood of future purchases and price expectations, should be polled.

151. Analysis of both group discussions and home placement acceptability tests will indicate the prospects for sale (through various outlets) of each of the canned Rastrelliger products as well as the price at which they might be sold, which products should be eliminated, which require further modification and which are alright as they stand. The optimum size for home usage should be apparent and the suggestions for names could well be incorporated in the can labelling and in the back up advertising material. Recipes indicated by home users could also be built into the advertising material.

6. Market Tests

152. Following the initial consumer acceptability tests on canned Rastrelliger products and following any necessary modifications to those selected, full scale market tests can be carried out in a representative sample of retail outlets at different centres in the target country (ies). The types of outlet chosen should be those through which canned oily fish products are normally sold and which consumers have indicated (in the acceptability trials) that they would expect to purchase canned fish. Facilities for the full scale market tests will necessarily have to be negotiated with retailers and the best basis on which to arrange this would be sale or return, permitting the retailer to retain the mark up on any product sold. The market tests should be designed to cover a sufficiently long period to permit an assessment to be made of repeat buying patterns and the possibly of seasonal influences - i.e. preferably one complete year.

153. Attractive can labelling and associated advertising material will have to be designed and a contract will necessarily have to be placed with the collaborating fish canner for a production run of the selected products, sufficient to cover anticipated sales.

154. The placement of the product in the various retail outlets will have to be planned carefully so that it is placed alongside competitive canned oily fish products, and for comparative purposes in certain instances, in other favorable positions. The price at which the various products are pitched can only be decided once the projected cost of production has been indicated by the collaborating fish canner, and when the price of similar competitive products already selling in the target market have been identified. Due regard should, of course, also be paid to the price expectations indicated by potential consumers in the acceptability trials.

155. Sufficient instore promotion must be provided to overcome any lack of awareness by the customer that the product is being offered for sale. Such promotion could take the form of leaflets, demonstrations, loud hailer announcements, press advertising and if carefully planned and considered necessary, buying incentives could be offered - at least initially.

156. Careful monitoring systems will necessarily have to be set up to meet the aims and objectives of the market test. The following factors must be determined:

(i) level of sales in each type of outlet;

(ii) level of sales per unit area display (i.e. the level of return on the canned Rastrelliger must merit allocation of shelf space by supermarket and other store managements);

(iii) comparative level of sales in relation to those achieved by other canned fish and particularly by competitive canned oily fish products;

(iv) the repeat buying pattern must be established - either by interview (on exit from the stores) or by questionnaire;

(v) number of customer purchases in each outlet on a daily basis.

157. The data collected in the course of such a market test should be sufficient to enable commercial fish producers to make an investment decision (i.e. whether or not to launch the products on a commercial basis).

APPENDIXES

Appendix		Page
1	Members of the European Economic Community (EEC)	53
2	Members of the European Free Trade Association (EFTA)	54
3	Developing Countries and Territories Enjoying Generalized Tariff Preferences	55
4	African, Caribbean and Pacific Countries Associated with the EEC by the Lomé Convention	56

Appendix 1

MEMBERS OF THE EUROPEAN ECONOMIC COMMUNITY (EEC)

France

Netherlands

Federal Republic of Germany

United Kingdom)

Denmark) new member countries

Irish Republic)

Belgium

Luxembourg

Italy

Appendix 4

AFRICAN, CARIBBEAN AND PACIFIC COUNTRIES ASSOCIATED WITH THE EEC BY THE LOME CONVENTION

Bahamas
Barbados
Botswana
Burundi
Cameroon
Central African Republic
Chad
Congo
Dahomey
Guinea (Equatorial)
Ethiopia
Fiji
Gabon
Gambia
Ghana
Grenada
Guinea
Guinea Bisson
Guyana
Ivory Coast
Jamaica
Kenya
Lesotho
Liberia
Malagasy Republic
Malawi
Mali
Mauritania
Mauritius
Niger
Nigeria
Ruanda
Senegal
Sierra Leone
Somali
Sudan
Swaziland
Tanzania
Togo
Tonga
Trinidad and Tobago
Uganda
Upper Volta
Western Samoa
Zaire
Zambia